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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kari Niemela

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12/12/2005

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EXAMINER

LEE, CHI HO A

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. **UK**

09/866,577

Applicant(s)

NIEMELA ET AL.

Examiner

Andrew Lee

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-13 is/are rejected.
- 7) ☒ Claim(s) 6-8 and 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 5, 9, 10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reilly U.S. Patent Number 5,953,668 in view of Lehtimaki, PCT WO96/32823 Pub Oct. 17, 1996 (See U.S. Patent Number 5,991,716).

Re Claim 1, Reilly teaches in fig. 2 (See col. 2, lines 56-65), dynamically assigning channels between air interface traffic (Um) channels and Abis-interface traffic (allocating fixedly a certain number of channels; allocating dynamically), wherein the channels assigned encompasses base-station specific operations such as CH-MGMT, maintenance signaling such as HO-HL, and transceiver-specific telecommunication signaling such as call setup from the MS.

Reilly fails to explicitly teach, "allocating dynamically, using inband signaling...packet data transfer, the amount of packet data varying according to the modulation and coding scheme used on a Um interface".

Lehtimaki teaches TRCU (analogous to TRAU in Reilly fig. 2) whereby inband signaling is used to dynamically varying the coding and modulation of the frame (packet data) based on the Um interface (See col. 5, lines 15-64).

One skilled in the art would have been motivated by Lehtimaki to include the inband signaling into Reilly to improve performance and quality due to propagation delay of the radio channel. Therefore, it would have been obvious to one ordinary skilled to combine the teaching of Lehtimak into the teaching of Reilly.

Re Claim 9, refer to Claim 1, Reilly teaches in fig. 3, the base station 40; transceivers 43 & 49 implementing a Um interface; Encoder 45 & Decoder 46 collectively the codec; a DSP (a packet control unit) for the Abis interface.

Re Claims 2, 5, 10, 13, refer to Claim 1, DRM of Reilly inherently allocated entirely dynamically according to the transfer need to plurality of MS (different Um interface connections).

3. Claims 3, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reilly U.S. Patent Number 5,953,668 in view of Lehtimaki, PCT WO96/32823 Pub Oct. 17, 1996 as applied to Claim 1 above and further in view of Hjelm et al U.S. Patent Number 5,978,368.

Re Claims 3, 11, Reilly in view of Lehtimaki fails to explicitly teach "at least one transmission channel is continuously kept allocated to each channel codec unit allocated to Um interfaces packet data transfer.". However, Hjelm teaches in fig. 1, the GPRS IDLE list 56 whereby the channels are reserved for packet data transfer as opposed the GSM idle list reserved for circuit voice transfer (See col. 6, lines 13-49), wherein the GPRS IDLE list is reserved (continuously kept allocated) for packet service as opposed to non-packet service channels in the GSM idle list. One skilled in the art

Art Unit: 2663

would have motivated to reserve available resources to guarantee transmission channels for packet data service.

4. Claims 4, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reilly U.S. Patent Number 5,953,668 in view of Lehtimaki, PCT WO96/32823 Pub Oct. 17, 1996 as applied to Claim 1 above and further in view of Malmgren et al U.S. Patent Number 6,334,057.

Re Claims 4, 12, Reilly in view of Lehtimaki fails to explicitly teach allocated the uplink and downlink asymmetrically. However, Malmgren teach channel allocation in a TDMA system with asymmetric uplink and downlink traffic (See fig. 5). One skilled in the art would have Malmgren to allocated uplink and downlink asymmetrically to minimize intercell interference (See col. 4, lines 44-48).

Allowable Subject Matter

5. Claims 6-8 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with claims 1 and 6; claims 9 and 14, prior art fails to teach the a master channel comprising information on the number and location of other transmission channels used for transferring packet data.

Response to Arguments

6. Applicant's arguments with respect to claims 1-2, 5, 9, 10, 13 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 571-272-3130. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANDY LEE
PATENT EXAMINER

AI
12/06/05

